

Gordon D. Lassahn
Researcher, Retired from INEEL in 2001

Work at INEEL:

Dr. Gordon Lassahn started at the Idaho National Engineering and Environmental Laboratory in 1974. His early work at the INEEL was primarily in the development of two-phase flow instrumentation for nuclear reactor safety experiments. During his 27 year career at INEEL, he worked extensively in the following areas:

- development of hardware, implementation techniques, data analysis procedures, and fundamental areas of theory for transit time flow meters using thermocouples as sensors;
- theoretical development and laboratory demonstration of a new concept for two-phase fluid flow velocity measurement using radiation beam intensity correlation;
- development of modeling procedures and computer programs to extrapolate from a few local measurements to obtain total flow area profiles of fluid velocity, density, and mass flow rate for two-phase flow in a pipe;
- development of efficient procedures for processing high-count rate gamma radiation energy spectrum data from radiation-hardened gamma densitometers (for measuring steam-liquid water density profiles in nuclear reactor coolant pipes), including analytical corrections for pile-up events;
- formulation of a concisely defined uncertainty analysis methodology that gives results with a specific, consistent, objective meaning; uncertainty analyses for a variety of measurement systems.

He also worked in other areas, most of which involved applied mathematics, algorithm development, and computer implementation for complex data analysis and interpretation problems. He also regularly constructed numerical models of physical systems, such as a model of the vaporization of a solid particle in a thermal plasma.

In 1998, he began research that ultimately became the Change Detection System, a major advance in digital imagery comparison and processing technology. He retired from INEEL in 2001 and lives in Idaho Falls, Idaho with his wife.

Previous Work:

From 1970 to 1974, he worked at the Rocky Flats nuclear weapons plant in Colorado primarily conducting various kinds of non-destructive testing.

Education:

Gordon attended Iowa State University, earning a B.S. in physics in 1964 and a Ph.D. in solid state physics in 1970.

Patents/Publications: Co-inventor on three patents; author or co-author of 12 journal articles, 20 published conference presentations, and numerous formal and informal reports and unpublished conference presentations.

